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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/176,124	10/21/1998	GERHARD SCHNEIDER	10191/857	7808

26646 7590 01/02/2002

KENYON & KENYON
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

TUNG, TA HSUNG

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 01/02/2002

22

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/176,124

Applicant(s)

SCHNEIDER ETAL

Examiner

T. TUNG

Group Art Unit

1743

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—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 10-19-01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-7 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-7 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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Claims 3-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3, it is unclear what is the final sensor element being claimed. Prior to sintering, the measuring cell layer is stated to include at least two foils while the covering layer is stated to include at least one foil. How many foils are there in the final product after sintering?

Claim 5, line 7, if the "heating conductor" is the same as the "heating conductor" set forth at parent claim 1, line 7, the two should be corresponded.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada 4,505,806 or Yamada 4,505,807.

'806 discloses (figures 7-9) a heating conductor 16a located in a plane approximately half way between the top and the bottom of a sensor element. Layer ¹³13'a can be considered to be the "measuring cell layer", while the bottom layer ¹³13'b can be considered to be the covering layer. The heating conductor is sandwiched by two insulating layers 13'b and the layer immediately underneath it. See col. 6, lines 20-63.

As for claim 3, it is not evident that the wording requires more than one foil in the measuring cell layer or the covering layer final structure. As for claim 4, the "further layer" is met by the protective film over the electrode of the measuring cell layer (see col. 5, line 42 of the patent), or by layer 13'b or the layer immediately underneath it.

Art Unit: 1102

'807 discloses (figures 1-3) a measuring cell layer 2, a covering layer 1 and a heating conductor 13 located in a plane approximately half way between the top and the bottom of a sensor element. The heating conductor is sandwiched by two insulating layers 6 and 3. See col. 3, line 23 to col. 8, line 47.

As for claim 4, the "further layer" is met by either layer 6 or layer 3 of the patent.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al 5,529,677 in view of Yamada '806 or Yamada '807.

Schneider discloses applicant's basic sensor element including a measuring cell layer 14/22, a covering layer 29 and a heating conductor 27 sandwiched by two insulating layers and surrounded by a sealing frame. See col. 2, line 29 to col. 4, line 19. Applicant's claims differ by calling for the heating conductor to be located in a plane centered between the top and the bottom of the sensor element.

As discussed before, either Yamada discloses a heating conductor arranged in a plane approximately halfway up a sensor element. It would have been obvious for Schneider to locate his heating conductor in a centered plane as shown by either Yamada, because such a location would permit even heat distribution between the top and the bottom of the sensor element.

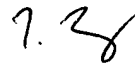
Temperature gradient within a sensor element may cause inaccurate measurement as well as cause thermal shock damage.

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The examiner can be reached at 703-308-3329. His supervisor Jill Warden can be reached at 703-308-4037. Any general inquiry should be directed to the receptionist at 703-308-0661. A fax number for TC 1700 is 703-872-9310.



Ta Tung

Primary Examiner

Art Unit 1743